

Public Input Regarding Logging on Vedder Mountain

Complaint Investigation 040594



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Executive Summary

Background

This investigation addresses a complaint from a group of concerned property owners (the complainant) south of Chilliwack. The complainant believes that a BC Timber Sales (BCTS) cutblock uphill of their lands will damage their water supply, wildlife and a rare plant species. The complainant said it had no meaningful opportunity to review plans to develop the cutblock. The Ministry of Forests and Range (MOFR) approved the cutblock before the complainant was aware of the proposed logging.

The Board investigated the effectiveness of the public review process, protection of water resources, and conservation of barred owl, mountain beaver, and phantom orchid habitat in the cutblock.

Findings

The Board found that Forest Practices Code requirements to provide an opportunity for public comment on the logging proposal were met. However, the process was ineffective in reaching the complainant. In a fair process, persons directly affected by a decision should have an opportunity to have their concerns heard, and addressed, before the decision is made. Some of the property owners have legal rights to drinking water draining from the area of the cutblock. Early and direct contact with those property owners, to define issues and concerns prior to plan approval, would have been a reasonable and more effective approach.

After the cutblock was approved, there was no requirement for further public review or comment. Nevertheless, BCTS and MOFR held ongoing discussions with the complainant about the cutblock. Some issues were resolved; others were not. Ultimately, BCTS kept to its intended deadline, and advertised the cutblock for sale before the complainant could review the results of a promised hydrologic assessment. This compromised the complainant's confidence in forest stewardship.

The Board found that BCTS adequately considered the risk to water supply through several terrain and hydrologic assessments. During planning, BCTS modified its operations, thus reducing the only high hazard to low. However, a subsequently-identified moderate hazard was not addressed; BCTS was not obligated to address this hazard and acted legally in accepting the risk. A moderate hazard does not mean that damage to water will occur.

Barred owls are not rare near Chilliwack. BCTS adequately protected barred owl by logging during the fall when the risk to nesting owls is minimal.

Mountain beaver habitat near Chilliwack is threatened, primarily by land development. BCTS had earlier committed to avoid harvesting timber near mountain beaver burrows. Although told by a biologist that mountain beaver were likely to occur in the cutblock, BCTS did not identify the location of any burrows. Two burrows were subsequently found by the complainant. Ultimately, BCTS protected both burrows. However, it would have been prudent for BCTS to have more thoroughly assessed the cutblock for mountain beaver in the first place.

Phantom orchid is an unusual, nationally threatened plant. BCTS did not react to the presence of phantom orchid in the cutblock area until late in its planning process. Nevertheless, BCTS did more than legally required; it changed its cutblock boundary to protect the plants. However, the buffer prescribed by BCTS is narrower than advised. Only monitoring will determine whether the prescribed buffer is effective, but no agency has made a formal arrangement to monitor the site.

Board Commentary

This complaint illustrates that the public continues to be concerned about the adequacy of public consultation, management of water supplies, and stewardship of threatened species. In this case, Code provisions for public notification about proposed logging were not effective; there was concern that personal water supplies were at risk; and the presence of two threatened species was not addressed until late in the planning process. Subsequently, in order to meet a timber sale deadline, consultation and stewardship efforts were cut short before they reached a conclusion satisfactory to the intervening public. The Board recognizes that public consultation cannot be open-ended, and that all parties must seek resolution of outstanding issues in a timely manner. However, this complaint illustrates that strict adherence to timber harvesting deadlines can reduce public confidence in the stewardship of forest resources.

Forest licensees will soon complete the transition from the Code to the *Forest and Range Practices Act* (FRPA). FRPA has similar public notification and review and comment provisions to the Code. However, forest stewardship plans under FRPA do not have to include as much detail as was previously required under the Code. Under FRPA, it will be particularly important for forest companies to remain open and responsive to public needs for information, if effective consultation is to be achieved. Forest professionals should take additional steps to involve potentially affected water users, and assure that the occurrence of threatened species is assessed early in the cutblock planning process.

Recommendation

BCTS made a decision to proceed with a narrower buffer than the available advice suggested for phantom orchid. There is no legal requirement for phantom orchid protection on provincial forest lands, so there is nothing wrong with BCTS's forest professionals applying their own judgment about whether an alternative approach to conservation would be successful. However, without monitoring, there is neither a way to know if the chosen approach was successful, nor an opportunity to allow future management to evolve from the experience. Forest professionals should not lose that learning opportunity.

The Board recommends that BCTS arrange, in association with the provincial phantom orchid recovery team, for formal monitoring of phantom orchid at its Vedder Mountain cutblock with the intent of determining the success of that particular prescription.

BCTS is asked to report back to the Board on implementation of this recommendation by September 30, 2006.



The Investigation

In October 2004, the Columbia Valley Stewardship Committee complained to the Board about proposed logging on Vedder Mountain, 26 kilometres south of Chilliwack.

The Columbia Valley Stewardship Committee (the complainant) is a group of private property owners who believe a logging cutblock uphill of their lands will damage domestic water, wildlife, and a rare plant species. The cutblock is on Crown land. The complainant says there was no meaningful opportunity to review plans to develop the cutblock. It would like to see an improved public involvement process in future.

Background

BC Timber Sales (BCTS) is an independent organization within the Ministry of Forests and Range (MOFR). BCTS plans cutblocks and sells the standing timber to small logging operators on behalf of the Crown. In July 2002, BCTS¹ proposed a 32.9 hectare cutblock on Vedder Mountain, in an amendment to its approved 2001-2005 forest development plan.

The amendment was advertised for public comment in local newspapers. However, the complainant claimed many property owners below Vedder Mountain remained unaware of the logging proposal, because they did not notice the advertisements. According to some property owners, there is no regular delivery of newspapers in that area. Ultimately, no public comments were submitted about the cutblock. The MOFR district manager approved the amendment in February 2003. After receiving approval, BCTS assumed full control over planning and sale of the cutblock, which it intended to occur by March 2004.

In March 2003, a property owner noticed flagging tape marking the cutblock on a steep slope of Crown land, just uphill of several licensed domestic and irrigation water intakes. The property owner called the forest district and was told the cutblock belonged to BCTS and was approved for harvest, but not yet sold. In response, a group of property owners formed the Columbia Valley Stewardship Committee to represent community interests in further discussions with BCTS and the forest district.

Through the remainder of 2003, the complainant, BCTS, and the forest district discussed the complainant's concerns about timber harvesting on Vedder Mountain. Some of the complainant's concerns were resolved. However, the complainant became disillusioned in February 2004, when BCTS tendered the cutblock for sale before the complainant had an opportunity to review the findings of a hydrologic assessment.

The cutblock has since been harvested. It is now 26 hectares, smaller than originally proposed, of which 8 hectares were reserved from harvesting. The cutblock is about 60 metres upslope of

¹ Then known as the Ministry of Forests Small Business Forest Enterprise Program.

several domestic and irrigation water intakes. It contains habitat for the species of concern to the complainant: barred owl, mountain beaver and phantom orchid.

Discussion

The Board investigated the complainant's concerns related to forest planning and practices under the *Forest Practices Code of British Columbia Act* and regulations (the Code).² The concerns examined were:

1. effectiveness of the public review process;
2. protection of water resources; and
3. conservation of barred owl, mountain beaver, and phantom orchid habitat in the cutblock.

1. Public Review

The complainant believes it was not given an adequate opportunity for public review and comment before the cutblock was approved, and that its concerns were not adequately considered in discussions that took place afterward.

Initial Opportunity for Public Review

The complainant believes it was overlooked during public review of BCTS' logging proposal. In support, it notes that in September 2002, the Fraser Valley Regional District (in providing agency comment about BCTS' plan amendment) advised BCTS to contact property owners downslope of the cutblock. BCTS did not do so.

The Code required BCTS to advertise its proposal in a local newspaper, make the plan available to the public, and provide at least a 60-day public review and comment period. BCTS was obligated to consider all comments it received and to make changes to its plan that it considered appropriate. BCTS met all these Code requirements.

In response to the regional district's suggestion to contact property owners, BCTS told the forest district manager it would do so after cutblock layout and assessments were complete. This was not likely to happen before the plan amendment was approved. Consequently, when the district manager approved the amendment in February 2003, neither BCTS nor the district manager knew whether the adjacent property owners were aware of the proposed cutblock, or what concerns they might have. Approved cutblocks have limited protection from cancellation under the Code. Some form of harvesting was almost certain once the district manager approved the amendment.

² The Board has similar authority under the *Forest and Range Practices Act*; however, that Act does not apply to the circumstances of this complaint, because the logging was approved under the Code.

The Board has previously reported that, in the interests of fairness, persons directly affected by a decision should have an opportunity to have their concerns heard and addressed before the decision is made.³ In this case, downslope property owners could be directly affected by a decision to harvest a cutblock on a steep slope just uphill of their property, and some of the property owners have legal rights to use water draining from the cutblock area.

Land ownership and water rights records are readily available to BCTS and the forest district. Direct contact with the downslope property owners, to define issues and concerns prior to plan approval, would have been a reasonable and more effective approach.

To help avoid missed opportunities to comment on future timber sale proposals, the complainant asked the forest district to improve the public consultation process. The process is set out in the Code and FRPA. The person preparing the plan has responsibility for public review and comment; not the forest district. To help resolve the complainant's concern, BCTS offered to directly contact the complainant whenever a BCTS forest development plan amendment, or forest stewardship plan, for the Columbia Valley area, is available for public review.

If effective public consultation is desired, the complainant (and the public) has a responsibility to stay informed about proposed forest harvesting, by BCTS or other licensees.

Code requirements for public comment on the amendment were met. However, the process was ineffective in reaching the complainant. This has been remedied; in future, when BCTS proposes forest harvesting in the Columbia Valley area, BCTS will contact the complainant directly. However, the complainant (and the public) still has a responsibility to stay informed about proposed forest harvesting, should other licensees also plan to log in the area.

Post-approval Discussion

After the cutblock was approved, there was no legal requirement for further public review and comment. Nevertheless, BCTS had committed to contact downslope property owners after cutblock layout. Before this contact was made, the complainant initiated discussions about the cutblock with both the forest district and BCTS. These discussions occurred over several months. Some issues were resolved. For example, BCTS agreed to modify the cutblock boundary and increase the number of trees retained. Other suggestions, such as the complainant's request for BCTS to defer harvesting or alternatively to log by helicopter, were refused.

In November 2003, the forest district agreed to do an overview assessment of the terrain and hydrology of the entire valley. In a letter to the complainant dated December 5, 2003, the district manager said that BCTS would "wait for the findings of that overview assessment." But six weeks later, in another letter to the complainant, the district manager revised his earlier

³ Forest Development Planning in the Queen Charlotte Islands Forest District, Special Investigation 950062; Complaint Investigation 950037. <http://www.fpb.gov.bc.ca/special/investigations/qci/qci/qcitran-09.htm>

statement, noting he did not have authority to make commitments on behalf of BCTS. There is no evidence that BCTS agreed to wait for the findings of the forest district's terrain and hydrologic assessment, or that it was prepared to delay its plan to sell the cutblock by the end of March 2004.

The forest district was not able to complete its assessment before the BCTS tender date. As the February tender date approached, BCTS had to decide whether to delay the sale or proceed. Based on the results of previous assessments, BCTS decided to proceed. To partially satisfy the forest district's promise, BCTS had a consultant assess the hydrology of the cutblock just days before posting the cutblock for sale. That assessment found no hydrological reason to change the cutblock.

BCTS advertised the cutblock for sale before the complainant was aware of the assessment results. To the complainant, that made the earlier collaborative discussions seem insincere. The complainant expressed its disappointment to both BCTS and the forest district. BCTS explained that it had always planned to sell the timber by March 31, 2004.

BCTS had not explained its operational deadline to the complainant early in the process. The complainant thought the collaborative discussions would continue until its concerns were either resolved, or concluded without agreement. BCTS's March 31 sale deadline meant that the cutblock had to be advertised for sale by late February. BCTS could have delayed the sale, but it chose not to because it had a timber quota to sell by March 31. A delay would affect its business; ultimately, BCTS kept on its schedule.

When logging is planned near people's homes, there is a particular need for open communication.⁴ In the circumstances, there was relatively open communication, but critical information about an operational deadline was either not requested and/or not disclosed early in the process; which constrained the effectiveness of the post-approval communications.

In this case, proactive communication between forest managers and the directly affected public, before approval of the cutblock, would have improved public confidence in forest management. The Board has previously recommended this approach as potentially more effective.⁵

The post-approval discussions were sincere. A number of important issues were resolved during that voluntary process. However, the complainant lost confidence in the process. Collaborative discussions, prior to approval of the cutblock, would have been a more effective approach.

⁴ Board News Release May 13, 1999. Poor Communication and Planning Led to Complaint about Logging on Sunshine Coast. <http://www.fpb.gov.bc.ca/news/releases/1999/05-13.htm>

⁵ Logging Plan Approval and Enforcement at Homesite Creek in the Sunshine Coast Forest District. Complaint Investigation 980142. <http://www.fpb.gov.bc.ca/COMPLAINTS/980142/14.pdf>

2. Water Resources

Several downslope property owners have licensed water intakes near the cutblock. The complainant believed the logging would damage water supply, and that BCTS did not adequately address this concern.

Forest managers sometimes use a watershed assessment to assess the risk of logging to water supply. A watershed assessment considers the physical characteristics of a watershed, and the effect of past and proposed forest practices on water quality, quantity and timing of flow.

The Code required a watershed assessment if harvesting was proposed within a community watershed, or a watershed with significant water resources (as determined by government officials), or if the district manager had previously decided a watershed assessment was necessary. None of these criteria applied in this case; so no watershed assessment was legally required.

Nevertheless, the Code did require BCTS to include measures in its forest development plan to protect water. BCTS had committed in its approved forest development plan to apply "more stringent" measures to protect water licences, but did not specify what those particular measures might be.

Code requirements for community watersheds would be an example of more stringent measures. In a community watershed, the Code prohibits cutting trees within 100 metres upslope of a water intake. The logged area is about 60 metres upslope of the closest water intake; other intakes are about 200 metres away. BCTS left these trees to help address water quality concerns and, for most of the water intakes, it exceeded the requirements for community watersheds. The cutblock is not in a community watershed; there was no legal requirement to leave any trees. BCTS met its commitment to be "more stringent."

The complainant is concerned that slope failures or soil erosion might damage its water supply. Unstable ground can affect water quality. BCTS was required to complete a terrain stability field assessment (TSFA) for any areas with a high likelihood of landslide, evidence of unstable ground, or a slope of 60 percent gradient or more.

BCTS did a preliminary terrain hazard assessment in March 2003; a more detailed TSFA in June 2003; and a cutblock-specific hydrologic assessment in February 2004. The March 2003 assessment identified a high-risk hazard—it predicted that road construction might cause a landslide, affecting a flat area below the cutblock. The flat area is a source of water for the properties below.

In response, the BCTS contractor designing the cutblock (a professional forester) identified the location of the water sources and planned roads, tree retention, and timber removal techniques to address the landslide concern. The forester was satisfied that damage to terrain and soils could also be avoided by partially suspending the timber on a cable during removal. In

addition, the forester made the cutblock smaller, eliminating some poor timber and further protecting the water sources below.

The more detailed June 2003 TSFA concluded that road building and logging, as modified, would reduce the instability hazard to low. In February 2004, just prior to advertising the cutblock for sale, BCTS had a hydrologic consultant specifically assess the potential impact of logging the cutblock on the downslope water sources. That report concluded that damage was unlikely.

However, in mid-March 2004, the forest district completed its promised overview assessment of the valley's terrain and hydrology. The assessment found no concern about terrain, but there was concern about seepage below the cutblock. Harvesting the cutblock would result in a moderate hazard of increasing groundwater flow below the cutblock. The hydrologist suggested caution and recommended that BCTS harvest fewer trees than planned. By this time, the cutblock had been advertised, but not yet sold. A moderate hazard of increased groundwater flow does not mean that an adverse impact will result, but indicates adverse impact is more likely than originally thought. BCTS considered the potential downslope hazard, against the impact of delaying the sale, and decided to sell the cutblock as planned.

Soon after road-building for the cutblock began, the complainant noticed increasingly dirty water at one domestic water intake, fed by an upslope stream. The complainant thought the road work might be the cause. During a field visit, Board staff found a tree felled by wind that had disturbed the stream some distance above the intake, causing sediment to enter the stream. Therefore, the dirty water was not related to the road building or the cutblock.

After harvesting, BCTS reviewed the amount of soil disturbance in the cutblock and found it to be within prescribed limits. The ground was frozen when the timber was removed from the area of greatest concern, which was ideal for minimizing disturbance. In another area, some soil was markedly disturbed, but was promptly seeded with grass to prevent erosion.

Terrain and hydrologic assessments were adequate to consider the risk to water supply. During planning, BCTS addressed the only high hazard by modifying its plan and reducing the hazard to low. However, a subsequently-identified moderate hazard was not addressed. BCTS was not obligated to address the moderate hazard; it acted legally in accepting the risk.

3. Barred Owl, Mountain Beaver and Phantom Orchid

The complainant was concerned that a recommended survey for barred owl was not done, and that neither mountain beaver nor phantom orchid were adequately protected. The Code did not obligate BCTS to assess the cutblock for any wildlife or rare species, although the professional forester that designed the cutblock looked for tall bugbane, an endangered plant (none were found).

Barred Owl

Barred owls are not rare in southwestern BC. While designing the cutblock, the forester saw a barred owl with young, suggesting a nest was nearby. The forester hired a professional biologist who, in June 2003, concluded the cutblock area was good barred owl habitat, although no nest was found. Barred owl habitat is not protected in BC, except for nests, which are protected only when occupied. The biologist suggested a further search for nests the following spring, but such a search was optional if timber harvesting would occur during fall months. Harvesting in the fall would minimize the risk to nesting owls. Neither the forester nor BCTS required a further survey. Harvesting began in October 2004.

BCTS adequately protected barred owl.

Mountain Beaver

The mountain beaver is a muskrat-size rodent that lives in moist underground burrows. Nationally, mountain beaver is a species of special concern and is listed in the federal *Species at Risk Act*. Mountain beaver in the Chilliwack area is provincially red-listed, meaning it is threatened, primarily by habitat loss from land development. While the animal itself is protected from harm by the BC *Wildlife Act*, its burrows have no specific legal protection on provincial forest lands, unless established as a wildlife habitat area. There is no wildlife habitat area near the cutblock.

Nevertheless, in its approved forest development plan, BCTS committed to protect mountain beaver burrows with a 10-metre buffer that would not be harvested. Burrow protection is important because most mountain beaver activity is within 25 metres of a burrow.⁶

No mountain beaver or burrows were noticed during initial layout of the cutblock. However, the biologist searching for owls saw a mountain beaver in the area, and reported that mountain beaver were likely to occur in the cutblock. BCTS did not act on the biologist's comment, but the complainant did. The complainant hired a local naturalist to search for mountain beaver. The naturalist found two burrows in the cutblock. One of the burrows was in a patch of timber to be retained and the other was in the area to be harvested. The professional forester designing the

⁶ Ministry of Environment. 1999. *Identified Wildlife Species Accounts*, Volume 1.
<http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/other/species/species-29.htm>

cutblock for BCTS had a second professional biologist confirm the reported locations, and then modified the cutblock boundary to protect the burrow in the area to be harvested.

Once made aware of the presence of burrows, BCTS followed through on its commitment to protect them. It would have been prudent of BCTS to have inspected the cutblock for mountain beaver on the basis of the first biologist's observation. If the complainant had not acted, logging would likely have disturbed mountain beaver habitat, contrary to BCTS' earlier commitment.

BCTS adequately protected mountain beaver, but only because of the complainant's independent search of the cutblock.

Phantom Orchid

Phantom orchid is known to occur in Canada at only 16 locations, all in southwestern BC. This unusual plant occurs only in association with a soil fungus and a host tree. It is difficult to detect because it can remain dormant below ground for many years.

The biologist that did the owl survey identified two phantom orchid flowers in the cutblock. The biologist recommended that BCTS have a botanist survey the area, but said that the fleeting nature of the flowers might make a search unsuccessful. As an alternative, the biologist suggested that the cutblock boundary be changed to protect the plants.

Although apparently secure over the bulk of its range in the United States, phantom orchid is threatened in Canada and is listed in the federal *Species at Risk Act*. In British Columbia, the plant is not protected on provincial forest lands. Under the Code, a "species at risk" and its habitat could be protected, if designated as "identified wildlife," and if government established a wildlife habitat area or general wildlife measure for the species.

Phantom orchid was designated a species at risk for Code purposes in 1999, and noted as "requiring protection." However, the plant was never designated as identified wildlife, and no protective measures were established for it.

BCTS had no legal responsibility to protect the plant, but nonetheless considered its stewardship options. The biologist had provided a map location, accurate to about ten metres, of two phantom orchid flower stalks. This indicated the presence of phantom orchid, but not the below-ground spread of the entire plant, or its associated soil fungus (which can be extensive). In mid-December 2003, about six months after discovery of the plants, BCTS sought advice from the Ministry of Environment (MOE)⁷ and other rare plant specialists.

MOE advised BCTS that protecting phantom orchid, which is sensitive to change, requires maintaining the existing micro-climate, rather than just protecting the individual flowers. Keeping the micro-climate stable would require a wide unharvested buffer; at least 500 metres

⁷ Formerly called the Ministry of Water, Land and Air Protection.

wide according to one orchid-fungi specialist. Such a large buffer would completely eliminate the cutblock, which was unacceptable to BCTS.

Other advice about protecting the orchid was available. A 1999 status report on phantom orchid suggested a 200-metre buffer.⁸ BCTS also considered this too wide to be practical, but one of the report authors, a plant specialist, maintained that 100 metres would be too narrow to be effective. A forest ministry ecologist suggested a 150-metre compromise. This debate indicates that no one knew exactly what to do. Ultimately, MOE recommended a 200-metre unharvested buffer around the presumed plant location, and suggested that BCTS or the forest district monitor success of the prescription.

BCTS considered what to do. In the mid-1990s, the BCTS timber sales manager had helped develop the Code's *Biodiversity Guidebook*, and had been involved in expert discussions about micro-climatic effects. BCTS considered that knowledge, the past logging history of Vedder Mountain, the location, slope and aspect of the cutblock, the surrounding vegetation, the available advice about phantom orchid, as well as its financial investment in the cutblock and its objective for timely harvesting. BCTS decided, given the location, topography, and vegetation on-site, that a 60-metre buffer could protect the orchid from micro-climatic change. It applied that size buffer. Neither BCTS nor the forest district agreed to monitor the effectiveness of the prescription.

The *Biodiversity Guidebook* states that the magnitude of micro-climatic change from forest management is influenced by surrounding vegetation and topography, and that very little influence from a harvested edge penetrates farther than 100 to 200 metres into the forest. A more recent forest ministry report suggests that micro-climatic effects from a harvested edge can extend into the forest for as little as 60 metres (soil temperature and moisture), or up to 240 metres or more (air temperature and humidity), depending on site conditions.⁹

The 60-metre buffer provided by BCTS is narrower than any specialist advised and, according to the forest ministry report, is the minimum distance that micro-climatic change could be expected to occur. At 60 metres, some degree of climatic change seems likely. Furthermore, 60 metres into the forest marks the approximate location of the orchid flower stalks—the more important actual location of the below-ground plant, and the extent of the soil fungus, remain unknown. The orchid, its fungus and host tree may be closer than 60 metres to the clearcut area.

In such uncertain circumstances, particularly where a threatened species is involved, a somewhat cautious approach to forest management seems warranted. BCTS did more than legally required, but less than available advice suggested. However, much is unknown and the

⁸ Klinkenberg, B. and R. Klinkenberg. 1999. COSEWIC status report on Phantom Orchid (*Cephalanthera austini*). Prepared for the Committee on the Status of Endangered Wildlife in Canada, Ottawa, Ontario.

⁹ Ministry of Forests extension note 21: Biodiversity and Interior habitats: the Need to Minimize Edge Effects. (1998) <http://www.for.gov.bc.ca/hfd/pubs/Docs/En/En21.pdf>

BCTS prescription may prove to be effective. That can only be determined by monitoring; however, there are no formal arrangements for monitoring the site.

BCTS did more for phantom orchid than legally required; it changed the cutblock boundary to protect the plants. After considering many factors, BCTS prescribed a narrower buffer than advised. If the site is not monitored, it will not be possible to determine whether the BCTS prescription was effective.

In March 2005, subsequent to BCTS applying its cutblock prescription, a provincial phantom orchid recovery team proposed a strategy to protect phantom orchid on forested lands. To guard against micro-climatic change, the team (which includes the agency and industry participants to this complaint) recommended a 260-metre wide prescription; a 60-metre unharvested buffer surrounding the plant, plus a 200-metre outer management zone. The team, in its draft report, did not specify what forest practices might be acceptable, or how many trees should be left, in the outer management zone. The team chair explained that the outer management zone is to protect the micro-climate of the unharvested buffer, and that some partial harvest near the buffer may be acceptable, but not a clearcut. At the Vedder Mountain cutblock, about 60 percent of the outer management zone is intact, the rest is clearcut.

In 2005, MOE informally inspected the cutblock area. MOE found several phantom orchid flower stalks about 100 metres downslope of the originally reported location, but could not find flower stalks at the original location. Phantom orchid can remain alive underground, with no evidence of a flower stalk. Therefore, the inspection confirmed that phantom orchid continues to persist in the area, but not whether the BCTS prescription was effective.

Conclusions

1. Public Review

Code requirements for public comment on the amendment were met. However, the process was ineffective in reaching the complainant. This has been remedied; in future, when BCTS proposes forest harvesting in the Columbia Valley area, BCTS will contact the complainant directly. However, the complainant (and the public) still has a responsibility to stay informed about proposed forest harvesting should other licensees also plan to log in the area.

The post-approval discussions about the cutblock were sincere. A number of important issues were resolved during that voluntary process. However, the complainant lost confidence in the process. Collaborative discussions, prior to approval of the cutblock, would have been a more effective approach.

2. Water Resources

Terrain and hydrologic assessments were adequate to consider the risk to water supply. During planning, BCTS addressed the only high hazard by modifying its plan and reducing the hazard to low. However, a subsequently-identified moderate hazard was not addressed. BCTS was not obligated to address the moderate hazard; it acted legally in accepting the risk.

3. Barred Owl, Mountain Beaver and Phantom Orchid

BCTS adequately protected barred owl.

BCTS adequately protected mountain beaver, but only because of the complainant's independent search of the cutblock.

BCTS did more for phantom orchid than legally required; it changed the cutblock boundary to protect the plants. After considering many factors, BCTS prescribed a narrower buffer than advised. If the site is not monitored, it will not be possible to determine whether the BCTS prescription was effective.

Recommendation

BCTS made a decision to proceed with a narrower buffer than the available advice suggested for phantom orchid. There is no legal requirement for phantom orchid protection on provincial forest lands, so there is nothing wrong with BCTS' forest professionals applying their own judgment about whether an alternative approach to conservation would be successful. However, without monitoring, there is neither a way to know if the chosen approach will be successful, nor an opportunity to allow future management to evolve from the experience. Forest professionals should not lose that learning opportunity.

The Board makes the following recommendation and, under section 132 of FRPA, asks BCTS to report to the Board on implementation of the recommendation by September 30, 2006:

The Board recommends that BCTS arrange, in association with the provincial phantom orchid recovery team, for formal monitoring of phantom orchid at its Vedder Mountain cutblock with the intent of determining the success of that particular prescription.



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